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Research Article

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# ANTECEDENTS AND CONSEQUENCES OF ENTREPRENEUR IMAGINATIVENESS

### 企業家想像力的前因和後果

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#### Abstract

This article aims to develop the entrepreneurial imaginativeness model (creative imaginativeness, social imaginativeness, practical imaginativeness) towards new product development performance with the antecedent of experience intensity. The respondents of this study are the 220 leaders of the Batik Micro Small and Medium Enterprises. The analysis technique in this study uses Structural Equation Modeling using AMOS software. The finding of this study is the main priority of entrepreneurial imaginativeness model development towards new product development performance by increasing creative imaginativeness, with indicators as follows: (1) I consider myself to be inventive; (2) I consider myself to be innovative; (3) I demonstrate originality in my work; and (4) I like to create original work. Creative imaginativeness is developed by experience intensity with the indicators as follows: (1) Business management; (2) Handling consumer complaints; (3) Good relations with outside parties; and (4) Handling dynamics.

**Keywords:** Experience Intensity, Creative Imaginativeness, Social Imaginativeness, Practical Imaginativeness, New Product Development Performance

摘要 本文旨在以經驗強度為先導,開發針對新產品開發績效的企業家想像力模型(創意想像力,社會想像力,實踐想像力)。這項研究的受訪者是蠟染微型中小企業的 220 位領導人。本研究中的分析技術使用通過 AMOS 軟件進行的結構方程建模。這項研究的發現是通過增加創造力的想像力,企業家的想像力模型開發對新產品開發績效的主要優先考慮,其指標如下: (1) 我認為自己具有創造力; (2) 我認為自己是創新的; (3) 我在工作中表現出獨創性; (4) 我喜歡創作原創作品。創造力是通過經驗強度和以下指標來發展的: (1) 業務管理; (二) 處理消費者投訴; (三) 與外界的良好關係;和(4) 處理動態

关键词: 體驗強度, 創意想像力, 社會想像力, 實踐想像力, 新產品開發績效

#### I. Introduction

The most fundamental organizational assets are human resources, while substantive human qualities are entrepreneurship [1]. Entrepreneurship theory stated that development is a historical process of structural change that is substantially driven by innovation [2]. The idea is a foundation for the company to produce new products or services, new business models, new processes, and bring organizational change or strategic change in general [3]. With imagination, entrepreneurs can create new ideas [4], [5]. Which provides entrepreneurial reactions and investment opportunities for new business [6].

Imagination is related to the ability to make mental images about things that might not exist in real life that cannot be observed and not measurable [7]. Imagination is not limited to visualization and the pure mental state that provides its equivalent; conversely, imagination includes human involvement with various external objects and events [8]. Imaginativeness facilitates creative creation by letting entrepreneurs imagine what could happen. This form of imaginativeness is used for creativity [9], innovation [9]; [3], new product development [11], [12] or production ideas [13].

The limitations of the study of entrepreneurial imaginativeness illustrate that entrepreneurial action models treat imagination as an important but latent construction that is rarely defined, far less measured. Imagination is rarely examined, much less defined or measured by researchers. Then, the study of antecedents and the consequences of imaginativeness are needed [14], [15] stated that the new product domain of mental image has become an important cognitive tool for consumers to learn about the benefits of new products, as visualization often goes beyond traditional retrospective views and take anticipatory perspective (i.e. encourage consumers to look forward and draw mental pictures of new uses in the future). Very little attention has been directed to understand imagination (mentally stimulating new uses) which has an impact on the new product to gain competitive advantage. Studies the understanding of new product on development show improvement and progress, but the failure rate of products is still around 40 [16]. Successful new product development (NPD) requires companies to not

only assimilate new knowledge obtained from external resources but also apply knowledge to understand market trends and take advantage of market opportunities [16]. Therefore, new product development is needed to be included in this study. Imagination in entrepreneurial studies is still limited as productive driving behavior in entrepreneurship [17].

Entrepreneurs show higher creative, social, and practical imaginativeness than nonentrepreneurs. Creativity and social imagination show positive relations with a new business idea generation. However, the relationship between social imagination and new business idea generation depends on entrepreneur experience [7]. Different entrepreneur experience has a different attitude and behavior [18]. Knowledge and experience possessed by entrepreneurs will influence the process of opportunities exploitation [19]. The challenges faced by MSMEs are new product development and competitiveness, but on the other hand, product follower is still dominating [20]. Therefore, this to develop aims the model entrepreneurial imaginativeness towards new product development performance with the antecedent of experience intensity.

### II. LITERATURE REVIEW

#### **A.** New Product Development Performance

Sustainable new product development and market introduction are important determinants of a company's sustainable performance. Although new products open up opportunities for companies, the huge risks associated with these new products cannot be ignored. Empirical studies show the high failure rate of new products, especially in the consumer market. The study conducted [21] explained that new product development (NPD) performance tends to experience failure, either at the last stage of the development process or at the commercial stage. The underlying causes of failure can be traced at an early stage, in the front end of the NPD. In general, this stage is defined as the period between the initial consideration of a new product idea and the decision to start or cancel product development. Therefore, it is clear that management is very interested in learning these things. Companies that encourage innovative products to target the market ahead of schedule will obtain positive financial performance, while companies that produce innovative products in a shorter time cycle will show greater sales and more profits.

[16] stated that the rapid development of science and technology as well as market demand requires new product development to become the key to the survival and sustainable development of the company. New product development (NPD) has been considered as an effective way to deal with the current competitive environment. By integrating company knowledge resources, accelerating the process of product innovation, the company can increase profitability and its competitiveness. However, due to the complexity and high risk from the process of new product development itself, the high failure rate of new product development and low efficiency inhibit the product development of the company; as to how to promote the performance of new product development team has become an important problem that needs to be solved. The study regarding the understanding of new product development shows improvement or progress, but the failure rate of the product is still around 40 percent. The results of the study show that the company can benefit substantially if it effectively manages and enhances the initial stages of the new product development process. The most important stages for successful innovation are usually referred to as the ideation phase, which includes product generation, creative filtering and selecting, and determines commercial value [22].

A blurred or wrong definition can result in high costs and failures at the stages of the new product development process [22]. However, a comprehensive conceptual framework identifies, illustrates and synthesizes key success factors is still limited. [15] suggested that the use of imagination is an approach to help consumers understand the benefits associated with new products and reduce uncertainty about how to achieve benefits. The business environment of a manager is always faced with the pressure of competitive threats from a new product developed by the main competitors. This gives the pressure to come out with new innovative products to compete. Many companies generally prefer to minimize their risk by investing in R&D when it comes to new product development. Besides, involving suppliers is one of the main factors in determining the success of NPD.

There are several reasons why efforts to develop innovative new products are needed. The first and foremost is that launching new products in front of competitors will help increase market share or company segments in their markets.

[24] explained that the company will obtain benefits from market-oriented product innovation processes and create customer value through new products. The study also illustrates that by developing new products, it not only helps to maintain share but also to grow their market share in competitive settings. The ability to manage NPD processes effectively and efficiently can result in improved performance in the new product development [24].

[21] in his study stated that the ability to manage the front end of NPD; in which strong product definition is developed, has a significant influence on product success. A blurred or wrong product definition may impact on the high cost of failure at the next stage, namely the development process. Hence, creative organizational culture is very crucial in the front end of NPD, since great ideas arise in an innovation-friendly culture that enhances communication and development required in the front end. The creative culture encourages the human resources of the company to use its innovative talent to produce and purify the flow of ideas. Creative culture also strengthens the market orientation of the company by promoting consistency, efficiency, and productivity. Besides, the concept of the initial product that is defined well will allow a better understanding of important matters, including development time, costs, technical skill, risk market potential, and organizational

In theory and practices, the definitions of the new product have been widely discussed among experts and scholars from various viewpoints, including the viewpoint of the manufacturer. consumers, and the product life cycle. It is further explained that the new part of most new products is not pure innovation, but imitation or improvement. Therefore, the definition of new products includes pure innovation and imitation [15]. Souder defined new products from the manufacturer's point of view: a new product is a product the company has never owned. In practice, the assessment of NPD performance can vary according to the industry, business strategy, or manufacturer design strategy. For example, NPD performance is presented to show the extent to which market objectives, time, cost, and quality are achieved in certain NPD projects [15]. Thus, the efficiency of NPD performance is related to cost, quality, schedule, speed, and emphasizes short-term results.

The study of NPD performance construct is operationalized using items that indicate the extent to which companies can achieve their

goals for new products; (a) time to market, (b) innovation, and (c) market performance [28]. Process management capability is the main source of NPD performance. Companies with strong process management capability mean that it can control and improve NPD management processes, thus enabling them to benefit from the time and cost savings. Strong ability to streamline and optimize NPD processes allows companies to adaptively allocate resources for various NPD tasks and increase the reliability of processing those tasks. In short, the ability to effectively manage NPD processes and efficiently can result in improved NPD performance.

The decision to start or cancel product development is made concerning a strong product definition. This means that a strong product definition has a strong influence on product development. Two main reasons explain the decision of why product development is canceled. First, an idea is abandoned if the decision-maker concludes that the proposed product has no or low commercial potential. Second, an idea is abandoned if it is not in line with the company's current business model, even though the idea has commercial values in several aspects [21].

#### **B.** Entrepreneur Imaginativeness

Entrepreneurs often make decisions in uncertain conditions with a very high frequency. This makes them be individuals who are imaginative and able to understand or create new opportunities that are unknown or not imagined by others. They pursue these opportunities to capture entrepreneurial benefits that would not be available in more certain and stable conditions. This challenging context contrasts with more static decision-making situations which are usually associated with managerial actions since there is still uncertainty in results that can produce maximum outcomes, but most possibilities are well understood [29].

Therefore, the dominant activity of large businesses starts with imagination, as it is very important for new business ideas. The idea is a foundation for the company to produce new products or services, new business models, new processes, and bring organizational change or strategic change in general [3]. [30] stated that most entrepreneurial action models treat imagination as an important but latent construction that is rarely defined, far less measured. Imagination is rarely examined, much less defined or measured by entrepreneurship scholars. Imagination is related to the ability to

make mental images about things that might not exist in real life that cannot be observed and are not measurable [7]. For management and entrepreneurial researchers, imagination is useful because it can be considered as a resource and source of profit [7].

Imaginativeness facilitates creative creation by letting entrepreneurs imagine what could happen. This form of imaginativeness is used for creativity [9], innovation [3], new product development [12]. Entrepreneurs use cognitive processes of structural alignment to find or imagine promising opportunities.

The dimension of entrepreneur imagination is required for the new value creation [31], which includes: a) Creative Imaginativeness, which facilitates product innovation by helping entrepreneurs anticipate the effects of introducing new knowledge into pricing systems through new products or services [32]; b) Social Imaginativeness, which facilitates communication and market response by helping entrepreneurs anticipate the effects of introducing new exchanges into the pricing systems [4]; and c) Practical Imaginativeness, which facilitates administration by helping entrepreneurs reflect on the feasibility and desirability of introducing new production structures into the pricing system through organizing and project management [33].

The results of the study from [7] found that imaginativeness affects new business ideas and the selection of new venture ideas positively and significantly. Specifically, imaginativeness and social imaginativeness predict higher levels of new idea generation, but not the selection of new venture ideas. On the contrary, practical imaginativeness predicts higher levels of the selection of new venture ideas, but not the new idea generation. Also, the three forms of imaginativeness explain several significant variances, but imaginativeness plays a more important role than creative or social imaginativeness. Based on these explanations, the hypothesis proposed in this study is:

H1: Creative imaginativeness increases the development of new productsH2: Social imaginativeness increases the

development of new products

H3: Practical imaginativeness increases the development of new products

#### C. Experience Intensity

According to [34], the experience is the accumulation of knowledge. Experience arises through a process of adaptation and accumulation, which results in the crystallization of knowledge.

Human capital theory [34] explained that if managers have more work experience, their views and mastery of expertise in the field of management will increase. On the other hand, economists use tenure as a measure for human capital, in which the type of work task is more challenging. The study from [19] showed that experience is an important variable in predicting performance. Various studies have operated on quantitative terms such as tenure. This approach cannot reflect the level of complexity and challenges faced in the workplace. They identified three dimensions of the quantitative component (the length of time or the number of times the task was carried out), the qualitative component (perception of challenges and complexity), and the interaction between the qualitative and quantitative components (density and experience time).

Knowledge and experience possessed by entrepreneurs will influence the process of recognizing and opportunities exploitation [36]. Therefore, this study includes entrepreneurial experience in the research model. According to human capital theory, prior experience as an entrepreneur is a domain-specific knowledge. Such experiences help entrepreneurs become adaptive to new tasks and influence how they identify and solve problems. The results from [37] proved that entrepreneurs with prior entrepreneurial experience will be more productoriented, have better financial skills, and are more balanced in important business skills.

The study from [38] stated that variations in work experience can improve performance, instead of general experience (length of work). The intensity of the experience is a maximum of 2 to 5 years. If there are long differences in experience between high employees (e.g. a new employee of 1 year, and another employee of 10 years), this work experience will reduce performance. The study conducted by [39]indicated knowledge to include: (1) Business management; (2) Consumer complaint handling; and (3) Good relations with outside parties.

Entrepreneurs show higher creative, social, and practical imaginativeness than non-entrepreneurs, and both creativity and social imaginativeness show a positive relationship with new business ideas generation. However, imagination and new business ideas generation depend on entrepreneurial experience [7]. Based on these explanations, the hypothesis proposed in this study is:

H4: Experience Intensity enhances Creative Imaginativeness.

H5: Experience Intensity enhances Social Imaginativeness.

H6: Experience Intensity enhances Practical Imaginativeness.

#### III. METHODS/ MATERIALS

#### A. Respondent

The population of this study is 1,201 leaders of the batik MSMEs industry in Central Java Province, which is distributed in Pekalongan City, Pekalongan Regency, Pati, Sukoharjo, Rembang, and Purbalingga (DisperindagProvinsiJateng, 2019). The sampling technique is done with purposive sampling and non-random sampling techniques, based on population characteristics, namely region or location and minimum operating time of 10 years. The sample size is determined by referring to [39], who stated that the sample size is an indicator multiplied by 5 to 10, or a minimum of 100 respondents. To make optimal generalizations, the sample of this study is 220 respondents.

#### **B.** Variable and Indicator

The indicator of New Product Development Performance refers to [41], which includes: (1) The time to market of new products; (2) The innovativeness of new products; and (3) The market performance of new products. The indicator of Creative Imaginativeness consists of: (1) I consider myself to be inventive; (2) I consider myself to be innovative; (3) I demonstrate originality in my work; and (4) I like to create original work. The indicator of Social Imaginativeness consists of: (1) It is easy for me to see things from the other person's point of view; (2) I always make an effort to see the world through other people's eyes; (3) I have a good sense for what other people are feeling; and (4) It is easy for me to understand why people feel the way they do. The indicator of Practical Imaginativeness consists of: (1) I tend to be good at project management; (2) I can picture what the bottleneck of a system will be, and (3) It is easy for me to understand why people feel the way they do [7]. The indicator of Experience Intensity consists of: (1) Business management; (2) Consumer complaint handling; (3) Good relations with outside parties; and (4) Dynamics handling [39].

The variables were measured with the questionnaire by using a Likert-scale with an answer scale of 1-5. The scale represented the

rating from 'strongly disagree' to 'strongly agree'. Table 1 shows the results of the validity and reliability test. Table 1 shows a loading factor value above 0.7 [42] and a minimum reliability value of 0.6 [39]. Therefore, it can be concluded that the instrument has validity and reliability.

Table 1. Validity and reliability test

No	Variable	Indicator	Loading Factor	Reliability
1	New Product	<ol> <li>The time to market of new products.</li> </ol>	0.84	0.72
	Development	<ol><li>The innovativeness of new products.</li></ol>	0.74	
	Performance	<ol> <li>The market performance of new products.</li> </ol>	0.75	
2	Creative	I consider myself to be inventive.	0.78	0.77
	imaginativeness	<ol><li>I consider myself to be innovative.</li></ol>	0.77	
		<ol><li>I demonstrate originality in my work.</li></ol>	0.79	
		I like to create original work.	0.79	
3	Social imaginativeness	<ol> <li>It is easy for me to see things from the other person's point of view.</li> </ol>	0.81	0.81
		<ol><li>I always make an effort to see the world through other people's eyes</li></ol>	0.73	
		<ol> <li>I have a good sense for what other people are feeling</li> </ol>	0.93	
		<ol> <li>It is easy for me to understand why people feel the way they do.</li> </ol>	0.79	
4	Practical imaginativeness	<ol> <li>I tend to be good at project management.</li> </ol>	0.82	0.76
		<ol> <li>I can picture what the bottleneck of a system will be.</li> </ol>	0.80	
		<ol> <li>It is easy for me to understand why people feel the way they do.</li> </ol>	0.83	
5	Experience	Business management	0.83	0.82
	Intensity	2) Consumer complaint handling	0.76	
		<ol><li>Good relations with outside parties</li></ol>	0.95	
		Dynamic handling	0.82	

#### IV. RESULT AND DISCUSSIONS

#### A. Hypothesis Test

The empirically model is tested using Structural Equation Modeling. The model indicates Chi-square = 134.977 with probability value of 0.342; GFI = 0.896, AGFI = 0.862 and TLI = 0.994, CFI 0.995 while value of RMSEA = 0.020. The result of the model is Fit. Based on statistical analysis, the results of this study indicate conformity with the required standard values. As shown in Figure 2 is the results of the Full Analysis Model.

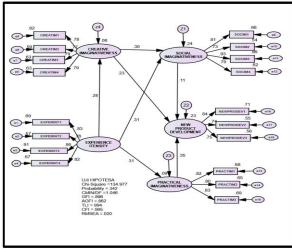


Figure 2. The results of full model analysis

Table 2 shows that from 6 hypotheses proposed, five hypotheses are supported by empirical data, but one hypothesis is rejected. Hypothesis 4 to 6; experience intensity enhances entrepreneurial imaginativeness (creative imaginativeness, practical imaginativeness, and imaginativeness) are supported social empirical data, which means that the hypotheses are accepted. Previous studies have emphasized role of knowledge, experience, motivation in opportunity identification and entrepreneurial actions. According to [39], previous experience of business ownership can carry a variety of assets, which may include managerial skill, technical skills, and a network of contacts that can be used in subsequent ventures. Experience can identify what is needed to get opportunities in the chosen market more clearly than novice entrepreneurs. Entrepreneurial logic is an important component of his experience; as dominant logic acts as an information channel filtered by entrepreneurs. This information channel is similar to the entrepreneurs' knowledge. Entrepreneurial cognition can be seen as an important component of specific entrepreneurial human resources [39]. In this study, indicators of experience intensity include business management, consumer complaint handling, good relations with outside parties, and dynamics handling. It is found that experience intensity can enhance entrepreneurial imaginativeness (creative imaginativeness, social imaginativeness, and practical imaginativeness). Thus, the results of this study support the study conducted by [7].

Hypothesis and 3: entrepreneurial imaginativeness (creative imaginativeness and practical imaginativeness) increases new product development performance is supported by empirical data, which means that the hypotheses are accepted. Imaginativeness is a skill that consists of tacit knowledge from experience and imagination ability. Since entrepreneurs may have more experience with new businesses, people might expect them to show higher ideational skills because they have gone through the process of creating a new business before. Imaginativeness that is applied in a creative sense to imagine what can happen is a form of imaginativeness that is used for creativity, innovation, new product development, or idea production. In this study, the indicators of creative imaginativeness include: (1) I consider myself to be inventive; (2) I consider myself to be innovative (3) I demonstrate originality in my work; and (4) I like to create original work. The indicators of practical imaginativeness include: (1) I tend to be good at project management; (2) I can picture what the bottleneck of a system will be, and (3) It is easy for me to understand why people feel the way they do. It shows that creative and practical imaginativeness are able to increase new product development performance. The indicators of new product development performance include: (1) The time to market of new products; (2) The innovativeness of new products; and (3) The market performance of new products. Therefore this study supports the research carried out by [7]. However, hypothesis 2; social imaginativeness increases new product development is not supported by empirical data, which means that the hypothesis is rejected.

Table 2. Inner Path Model Coefficients and their Significance

No	Exogenous variable	Endogenous variable	Std. Estimate	C.R.
1	Creative Imaginativeness	Experience Intensity	.278	2.769 *
2	Social Imaginativeness	Experience Intensity	.310	3.197 *
3	Practical Imaginativeness	Experience Intensity	.307	3.029 *
4	New Product Development	Practical Imaginativeness	.350	3.357 *
5	New Product Development	Creative Imaginativeness	.230	2.091 *
6	New Product Development	Social Imaginativeness	.114	1.068
	p < 0.05; * p < 0.10; ** p < 0.01;	*** p < 0.001		

# B. Direct Influence, Indirect Influence, and Total Influence

Analysis of direct influence, indirect influence, and total influence is intended to understand the influence of the hypothesized variable. The direct influence is the coefficient of all coefficient lines with one end arrow; or path coefficient. The indirect influence is the influence caused by the mediating variable. The total influence is the total sum of direct and indirect influence. The test results of direct influence, indirect influence, and influence of the antecedents variable of consequences entrepreneurial imaginativeness are presented in Table 3.

Table 3
Direct influence, indirect influence, and total influence

No	Variable	Influence	Experience Intensity	Creative Imaginativeness	Practical Imaginativeness	Social Imaginativeness
1	Creative Imaginativeness	Direct	.278	.000	.000	.000
		Indirect	.000	.000	.000	.000
		Total	.278	.000	.000	.000
2	Practical Imaginativeness	Direct	.307	.000	.000	.000
		Indirect	.000	.000	.000	.000
		Total	.307	.000	.000	.000
3	Social Imaginativeness	Direct	.393	.299	.000	.000
		Indirect	.083	.000	.000	.000
		Total	.393	.299	.000	.000
	New Product	Direct	.000	.230	.350	.114
4	Development	Indirect	.216	.034	.000	0000
	Performance	Total	.216	.264	.350	.114

The direct influence, indirect influence, and

total antecedents and consequences variable of entrepreneurial imaginativeness shows in Table 3 variable explain that the of creative imaginativeness directly influenced is experience intensity for 0.278, practical imaginativeness is directly influenced experience intensity for 0.307, and social imaginativeness is directly influenced experience intensity for 0.393. As for the indirect that affects the variable entrepreneurial imaginativeness does not appear in this research model because it is a variable at the first level in the structural equation model.

The variable of new product development performance is directly influenced by creative imaginativeness for 0.230. practical social imaginativeness for 0.350, and imaginativeness for 0.114. This shows that practical imaginativeness has a dominant product influence on new development performance. The direct influence of experience product intensity development on new entrepreneurial performance through imaginativeness is 0.216.

The total influence of experience intensity towards new product development performance is 0.216, creative imaginativeness towards new product development performance is 0.264, practical imaginativeness towards new product development performance is 0.350, and social imaginativeness towards new product development performance is 0.114. Based on these total influences, it is known that the practical imaginativeness variable has the greatest influence on a new product development performance of 35.0 %.

#### C. Managerial Implications

The testing of these hypotheses provides a more comprehensive model of entrepreneurial imaginativeness. First, creative imaginativeness facilitates product innovation by helping entrepreneurs anticipate the effects of introducing new knowledge into the pricing system through new products or services. Second, social imaginativeness facilitates communication and market responses by helping entrepreneurs anticipate the effects of introducing new exchanges to the pricing system. Third, practical imaginativeness facilitates administration by helping entrepreneurs reflect on the feasibility and desire to introduce new production structures to the pricing system through organizing and project management.

In addition, this study also provides managerial implication to a deeper understanding of important contextual issues that have an impact on the efforts to improve entrepreneurial imaginativeness, and in turn, improve new product development performance. It also highlights the importance of the entrepreneurial imaginativeness antecedents, namely experience intensity with the indicator of business management, consumer complaint handling, and good relations with outside parties.

#### **D.** Theoretical Implication

The main source of new product development performance is the ability of the management process because it can control and improve the management process of new product development performance. Thus, it enables them to benefit from the time and cost savings, as well as able to be adaptive to allocate resources for various product development tasks.

Imagination does not only include the idea of imaging, but it also includes human involvement with various external objects and events, which are the source of life for companies in producing new products or services, new business models, new processes, and bringing organizational changes or general strategy. Furthermore, the dimension of entrepreneurial imaginativeness includes (1) creative imaginativeness, which facilitates product innovation by helping entrepreneurs anticipate the effects of introducing new knowledge into the pricing system through products or services; (2) social imaginativeness. which facilitates communication and market responses by helping entrepreneurs anticipate the effects of introducing new exchanges to the pricing system; and (3) which facilitates practical imaginativeness, administration by helping entrepreneurs reflect on the feasibility and desire to introduce new production structures to the pricing system through organizing and project management.

Experience intensity possessed by entrepreneurs will influence the process of recognition and opportunity exploitation; as entrepreneurs become adaptive with new tasks and influence the way they identify and solve problems. It can be done with the indication of business management, consumer complaint handling, and maintain good relations with outside parties.

#### E. Limitations and Future Research

The results of calculations using AMOS software show that the influence of experience intensity towards creative imaginativeness is 27.8% and creative imaginativeness towards new product development performance is 23.0%, both belong to the moderate margin category.

Furthermore, the influence of social imaginativeness towards new product development performance is not significant. Thus, it becomes the black box of an interesting study field for future search by contributing to intervening o remediating variables.

#### V. CONCLUSION

Based on the hypotheses that have been developed in this study, the research problems that have been proposed can be justified through Structural Equation Modeling (SEM) testing. It has been conceptualized in this study regarding the relationships between variables that influence and is influenced by new product development performance. 4 constructs are proposed and supported empirically: experience intensity, creative imaginativeness, social imaginativeness, and practical imaginativeness. Based on the support of significance from the hypotheses test that has been solved the research problems, it results in an entrepreneurial imaginativeness development model towards new product development performance by enhancing creative imaginativeness. The indicators of creative imaginativeness include: (1) I consider myself to be inventive; (2) I consider myself to be innovative (3) I demonstrate originality in my work; and (4) I like to create original work. Creative imaginativeness is built by experience intensity with the indicators of (1) Business management; (2) Customer complaint handling; (3) Good relations with outside parties; and (4) Dynamics handling.

#### REFERENCES

- [1] YILMAZ, E. (2013) Examination of Entrepreneurship from Humanistic Values Perspective. *Sociology Mind*, 3(3), pp. 205-209.
- [2] HOSPERS, E.-J. (2005) Yoseph Schumpeter and his legacy in innovation studies. *Knowledge, Technology and Policy*, 18(3), pp. 20-37
- [3] VAN DEN ENDE, J., FREDERIKSEN, L., and PRENCIPE, A. (2014) The front end of innovation: Organizing search for ideas. *Journal of Product Innovation Management*, 32, pp.482–487.
- [4] CHILES, T. H., TUGGLE, C. S., MCMULLEN, J. S., BIERMAN, L., and GREENING, D. W. (2010) Dynamic creation: Extending the radical Austrian

- approach to entrepreneurship. *Organization Studies*, 31, pp.7–46.
- [5] CHILES, T. H., BLUEDORN, A. C., and GUPTA, V. K. (2007) Beyond creative destruction and entrepreneurial discovery: A radical Austrian approach to entrepreneurship. *Organization Studies*, 28, pp. 467–493.
- [6] VOGEL, P. (2016) From venture idea to venture opportunity. *Entrepreneurship Theory and Practice*, 41, pp. 943–971.
- [7] KIER, A. S. and MCMULLEN, J. S. **Imagining** new (2017)venture ideas: Development and validation of the imaginativeness Frontiers scale. of Entrepreneurship Research, 37(3), pp. 77-87. [8] HOPKINS, R. (2016) Sartre. In: KIND, A. (eds.), The Routledge handbook of philosophy of imagination. New York: Routledge, pp. 82–93.
- [9] LE BOUTILLIER, N., and MARKS, D. F. (2003) Mental imagery and creativity: A meta-analytic review study. *British Journal of Psychology*, 94, pp.29–44
- [10] LIEDTKA, J. (2014) Perspective: Linking design thinking with innovation outcomes through cognitive bias reduction. *Journal of Product Innovation Management*, 32, pp.925–938.
- [11] DAHL, D. W., CHATTOPADHYAY, A., and GORN, G. J. (1999) The use of visual mental imagery in new product design. *Journal of Marketing Research*, 36, pp. 18–28.
- [12] DAHL, D. W., CHATTOPADHYAY, A., and GORN, G. J. (2001) The importance of visualization in concept design. *Design Studies*, 22, pp. 5–26.
- [13] DE BONO, E. (1992) Serious creativity: Using the power of lateral thinking to create new ideas. New York: Harper Collins.
- [14] KIER, A. S. and MCMULLEN, J. S. (2018) Entrepreneurial imaginativeness in new venture ideation. *Academy of Management Journal*, 61(6), pp. 2265–2295. [15] ZHO, M., HOEFLER, S., DHAL, D. W. (2012) Imagination difficulty and new
- (2012) Imagination difficulty and new product evaluation. *The Journal of Product Innovation Management.* doi: https://doi.org/10.1111/j.1540-

5885.2012.00951.x

- [16] BAI, W., FENG, Y., YUE, Y., and FENG, L. (2017) Organizational structure, cross-functional integration and performance of new product development tea. *Procedia Engineering*, 174, pp. 621 629.
- [17] TALAT, T. and CHAN, K. (2019). Imagination in entrepreneurship: An inspiration from Heidegger. *Journal of Psychological Research*, 1(1), pp. 15-23.
- [18] PAUL W., DENIZ, U. and MIKE, W. (2005) Experience and cognition do novice, serial and portfolio entrepreneurs differ? *International Small Business Journal*, 23(1), pp.72–98.
- [19] CHEN, Y. and PAN, J. (2019). Do entrepreneurs' developmental job challenges enhance venture performance in emerging industries? A mediated moderation model of entrepreneurial action learning and entrepreneurial experience. *Frontiers in Psychology*, 10, 1371. doi: 10.3389/fpsyg.2019.01371
- [20] WIDODO, L., NURTCHOLIS, L., NUGROHO, M., and WIKANINGRUM, T. (2019). The development model of the influence of knowledge quality toward organizational performance based on entrepreneur learning. *International Journal for Quality Research*, 13(3), pp.521–538.
- [21] FLOREN, H., FRISHAMMAR J., PARIDA, V., and WINCENT, J. (2017) Critical success factors in early new product development: a review and a conceptual model. *International Entrepreneurship Management Journal*, 14, pp.411–427.
- [22] SCHEMMANN, B., HERRMANN, A. M., CHAPPIN, M. M. H., and HEIMERIKS, G. J. (2016) Crowdsourcing ideas: Involving ordinary users in the ideation phase of new product development *Research Policy*, 45(6), pp. 1145–1154.
- [23] FORBES, D. P. (1999) Cognitive Approaches to New Venture Creation. *International Journal of Management Review* 1(4), pp. 415–439
- [24] SIRIVARISKUL, N. (2019) The mediating impact of new product innovativeness on the relationship between learning orientation and new product performance in Thailand ISO 1900 Industry. *International Review of Management and Marketing*, 10(1), pp.1-6.

- [25] TAI, Y.-M. (2017) Effects of product life cycle management systems on new product development performance. *Journal of Engineering and Technology Management*. 46, pp. 67-83. doi: 0.1016/j.jengtecman.2017.06.001.
- [26] CHANG, W. and TAYLOR, S. A. (2016) The effectiveness of customer participation in new product development: A meta-analysis. *Journal of Marketing*, 80(1), pp.47–64.
- [27] SONG, X. M., and PARRY, M. E. (1997) A cross-national comparative study of new product development processes: Japan and the United States. *Journal of Marketing*, 61(2), pp.1–18.
- [28] THOMAS, E. (2013). Supplier integration in new product development: computer mediated communication, knowledge exchange and buyer performance. *Industrial Marketing Management*, 42 (6), pp.890–899.
- [29] MCVEA, J. (2009) A field study of entrepreneurial decision-making and moral imagination. *Journal of Business Venturing*, 24, pp. 491–504.
- [30] GREGOIRE, D. A. and SHEPHERD, D. A. (2012) Technology-market combinations and the identification of entrepreneurial opportunities: An investigation of the opportunity-individual nexus. *Academy of Management Journal*, 55(4), pp.753–785.
- [31] BARRETO, H. (2007) The entrepreneur in microeconomic theory: Disappearance and explanation. London: Routledge.
- [32] MCMULLEN, J. S. and KIER, A. S. (2017) You don't have to be an entrepreneur to be entrepreneurial: The unique role of imaginativeness in new venture ideation. *Business Horizons*, 60(4), pp.455–462.
- [33] GARTNER, W. B. (2016) Entrepreneurship as organizing. Cheltenham: Edward Elgar.
- [34] KRAFFT, M. (1999) An Empirical investigation of the antecedents of sales force control systems. *Journal of Marketing*, 63(3), pp.120-134. doi: 10.2307/1251779
- [35] HUSEILD, M. A., BECKER, B., PICKUS, P.S. and SPARAT, M. F. (1997) Human resources as a source of shareholder value: Research and recommendation.

- Human Resource Management Journal, 31, pp.1-6.
- [36] NICOLAOU, N. and SHANE, S. (2015) Creative personality, opportunity recognition and the tendency to start businesses: A study of their genetic predispositions. *Journal of Business Venturing*, 30(3), pp. 407–419. doi: 10.1016/j.jbusvent.2014.04.001
- [37] WIDODO and NUHAYATIE, T. (2018) The development model of exploitability knowledge based on entrepreneurial learning to innovative performance and sustainable competitive advantage. *International Journal of Innovation Creativity and Change*, 4(2), pp.123-133.
- [38] SCHMID, F., HUNTER, J. N. and OUTERBRIDGE, A. N. (1986) Impact of job experience and ability on job knowledge, work sample performance and supervisory ratings of performance. *Journal of Applied Psychology*, 71(3), pp.432-439.
- [39] ELLIS, S., MENDEL, R., and NIR, M. (2006) Learning from successful and failed experience: the moderating role of kind of after-event review. *Journal of Applied Psychology*, 91(3), pp.669–680.
- [40] HAIR, Jr., F. J., ANDERSON, R. E., and TATHAM R. L. (1996) *Multivariate Data Analysis with Readings*, 2nd ed. New York: Macmillan.
- [41] THOMAS, E. (2013) Supplier integration in new product development: computer mediated communication, knowledge exchange and buyer performance. *Industrial Marketing Management*, 42(6), pp.890–899.
- [42] SEKARAN, U. and BOUGIE, R. (1992) Research Methods for Business: A skill building approach. 7<sup>th</sup> ed. Chichester: John Willey & Sons.

# 参考文:

- [1] YILMAZ, E. (2013) 從人文價值觀角 度考察企業家精神。 Sociology Mind, 3 (3), 第 205-209 頁。
- [2] HOSPERS, E.-J。(2005)Yoseph Schumpeter 及其在創新研究中的遺產。知 識,技術和政策, 18(3),第 20-37 頁 [3] VAN DEN ENDE, J., FREDERIKSEN, L.和 PRENCIPE, A.(2014)創新的前

- 端:組織對思想的搜索。產品創新管理雜誌,32,第482-487頁。
- [4] CHILES, T. H., TUGGLE, C. S., MCMULLEN, J. S., BIERMAN, L.和GREENING, D.W. (2010) 動態創造:擴展了激進的奧地利企業家精神方法。組織研究, 31, 第7至46頁。
- [5] CHILES, T. H., BLUEDORN, A. C. 和 GUPTA, V. K. (2007) 超越創造性破壞和企業家發現:奧地利對企業家精神的激進態度。組織研究, 28, 第 467-493 頁。[6] VOGEL, P. (2016) 從創業理念到創業機會。創業理論與實踐, 41, 第 943-971 頁。
- [7] KIER, A. S. 和 MCMULLEN, J. S. (2017) 想像新的創業理念:想像力量表的開發和驗證。創業研究前沿,37(3),第77-87頁。
- [8] HOPKINS, R. (2016) 薩特。在:種類, A. (編輯), Routledge 想像的哲學手冊。紐約: Routledge, 第 82-93 頁。
- [9] LE BOUTILLIER, N。和 MARKS, D。 F. (2003) 心理圖像與創造力:一項薈萃 分析研究。英國心理學雜誌, 94, 第 29-44 頁
- [10] LIEDTKA, J. (2014) 觀點:通過減少認知偏差將設計思維與創新成果聯繫起來。產品創新管理雜誌, 32, 第 925–938 頁。
- [11] DAHL, D. W., CHATTOPADHYAY, A.和 GORN, G. J. (1999) 在新產品設計中使用視覺心理圖像。市場研究雜誌, 36, 第 18-28 頁。
- [12] DAHL, D. W., CHATTOPADHYAY, A.和 GORN, G. J. (2001) 可視化在概念 設計中的重要性。設計研究, 22, 第 5-26 頁。
- [13] DE BONO, E. (1992) 認真的創造力:利用橫向思維的力量來創造新的想法。 紐約:哈珀·柯林斯。
- [14] KIER, A. S. 和 MCMULLEN, J. S. (2018) 新企業構想中的企業家想像力。 管理學院學報, 61 (6),第 2265-2295 頁。 [15] ZHO, M., HOEFLER, S., DHAL, D。W. (2012) 想像力難度和新產品評估。

- 產品創新管理雜誌。 doi: https://doi.org/10.1111/j.1540-5885.2012.00951.x [16] BAI, W., FENG, Y., YUE, Y.和 FENG, L. (2017) 組織結構, 跨職能整合和新產品開發茶的性能。過程工程, 174, 第 621 629 頁。
- [17] TALAT, T. 和 CHAN, K. (2019)。 創業中的想像力:海德格爾的靈感。心理 研究雜誌, 1 (1),第15-23頁。
- [18] PAUL W., DENIZ, U。和 MIKE, W. (2005) 新手, 序列企業家和投資組合企業家的經驗和認知是否有所不同?國際小型企業雜誌, 23 (1),第72-98頁。
- [19] CHEN, Y.和 PAN, J. (2019)。企業家的發展性工作挑戰是否會增強新興產業的風險績效?企業家行為學習和企業家經驗的中介調節模型。心理學前沿, 10,
- 1371. doi: 10.3389 / fpsyg.2019.01371
- [20] WIDODO, L., NURTCHOLIS, L., NUGROHO, M. 和 WIKANINGRUM, T. (2019年)。基於企業家學習的知識質量對組織績效的影響的發展模型。國際質量研究雜誌, 13 (3), 第 521-538 頁。
- [21] FLOREN, H., FRISHAMMAR J., PARIDA, V. 和 WINCENT, J. (2017) 早期新產品開發中的關鍵成功因素: 綜述和概念模型。國際企業家管理雜誌, 14, 第 411–427 頁。
- [22] SCHEMMANN, B., HERRMANN, A. M., CHAPPIN, M. M. H., 和 HEIMERIKS, G. J. (2016) 眾包想法:讓普通用戶參與新產品開發的想法階段研究政策, 45 (6), 1145–1154。
- [23] FORBES, D。P. (1999) 新創企業的認知方法。國際管理評論雜誌, 1 (4), 第 415-439 頁
- [24] SIRIVARISKUL, N。(2019),新產品創新對泰國 ISO 1900 行業中學習導向與新產品性能之間關係的中介影響。
- 《管理與市場營銷國際評論》, 10(1), 第1-6頁。
- [25] TAI, Y.-M。 (2017) 產品生命週期 管理系統對新產品開發績效的影響。工程 技術管理學報。 46, 第 67-83 頁。 doi: 0.1016/j.jengtecman.2017.06.001。
- [26] CHANG, W. 和 TAYLOR, S. A. (2016) 客戶參與新產品開發的有效性:

- [27] SONG, X. M. 和 PARRY, M. E. (1997) 對新產品開發過程的跨國比較研究:日本和美國。市場營銷雜誌, 61 (2),第 1-18 頁。
- [28] THOMAS, E。(2013)。供應商在新產品開發中的集成:計算機介導的溝通,知識交流和買方績效。工業市場營銷管理,42(6),第890-899頁。
- [29] MCVEA, J. (2009) 對創業決策和道 德想像力的實地研究。商業冒險雜誌, 24, 第 491-504 頁。
- [30] GREGOIRE, D. A.和 SHEPHERD, D. A. (2012) 技術-市場組合與企業家機會的識別:機會-個人關係的調查。管理學院學報,55(4),第753-785頁。
- [31] BARRETO, H. (2007) 微觀經濟學 理論中的企業家:消失和解釋。倫敦: Routledge。
- [32] MCMULLEN, J。S. 和 KIER, A。S. (2017) 您不必成為一名企業家就可以成為企業家: 想像力在新創想中的獨特作用。商業視野, 60(4),第 455–462 頁。
- [33] GARTNER, W. B. (2016) 企業家精神的組織。切爾滕納姆:愛德華·埃爾加。 [34] KRAFFT, M. (1999) 對銷售人員控制系統的前身進行的實證研究。市場營銷雜誌, 63 (3),第 120-134 頁。doi: 10.2307 / 1251779
- [35] HUSEILD, M<sub>o</sub> A., BECKER, B., PICKUS, P. S<sub>o</sub> SPARAT, M. F.
- (1997),人力資源是股東價值的來源:研究和推薦。人力資源管理雜誌,31,第 1-6頁。
- [36] NICOLAOU, N. 和 SHANE, S.
- (2015) 創造性人格,機會識別和創業傾向:對他們遺傳易感性的研究。《企業風險投資雜誌》,30(3),第407-419頁。
- doi: 10.1016/j.jbusvent.2014.04.001 [37] WIDODO 和 NUHAYATIE, T.
- (2018) 基於創業者學習到創新績效和可持續競爭優勢的可利用性知識的發展模型。 國際創新創造力與變化雜誌,4(2),第 123-133頁。

- [38] SCHMID, F., HUNTER, J. N.和 OUTERBRIDGE, A. N. (1986) 工作經驗和能力對工作知識,工作樣本績效和績效監督等級的影響。應用心理學雜誌,71 (3),第 432-439 頁。
- [39] ELLIS, S., MENDEL, R. 和 NIR, M. (2006) 從成功和失敗的經驗中學習: 事後回顧的調節作用。應用心理學雜誌, 91 (3),第 669-680頁。
- [40] HAIR, Jr., F。J., ANDERSON, R. E.和 TATHAM R. L. (1996) 帶有讀數的 多元數據分析, 第二版。紐約:麥克米倫。 [41] THOMAS, E. (2013), 新產品開發中的供應商整合:計算機介導的溝通,知識交流和買方績效。工業營銷管理,42 (6),第890-899頁。
- [42] SEKARAN, U. 和 BOUGIE, R. (1992) 商業研究方法:一種技能培養方法。第七版。奇切斯特:約翰·威利父子。

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### **COVER LETTER**

### Antecedents and Consequences of Entre preneur Imaginativeness

Abstract: This article aims to develop entrepreneurial imaginativeness model (creative imaginativeness, social imaginativeness, practical imaginativeness) towards new product development performance with the antecedent of experience intensity. The respondents of this study are the 220 leaders of the Batik MSMEs industry. The analysis technique in this study uses Structural Equation Modeling (SEM) using AMOS software. The finding of this study is the main priority of entrepreneurial imaginativeness model development towards new product development performance by increasing creative imaginativeness, with indicators as follows: (1) I consider myself to be inventive; (2) I consider myself to be innovative; (3) I demonstrate originality in my work; and (4) I like to create original work. Creative imaginativeness is developed by experience intensity with the indicators as follows: (1) Business management; (2) Handling consumer complaints; (3) Good relations with outside parties; and (4) Handling dynamics.

imaginativeness is developed by experience in	riginality in my work; and (4) I like to create original work. Creative ntensity with the indicators as follows: (1) Business management; (2) ons with outside parties; and (4) Handling dynamics.
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